REMARKS

The Office Action dated August 21, 2008 has been carefully considered. In the Office Action, claims 1-14 and 16-18 were indicated to be finally rejected. Claims 1-14 and 16-18 remain pending and at issue herein. Applicant respectfully requests reconsideration and indication of allowability of claims 1-14 and 16-18 in light of the following remarks.

The Examiner rejected claims 1-14 and 16-18 under 35 U.S.C. §103(a) as being unpatentable over Hanke (US 4,869,786) in view of Weit (US 5,232,096). Applicant has reviewed the cited references and the Examiner's application thereof, but Applicant must respectfully traverse this ground of rejection for the reasons discussed below.

The Federal Circuit has made clear that a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). Applicant respectfully submits that the Examiner failed to consider the Hanke and the Weit in their entirety in contradiction to the Federal Circuit's clear instruction.

The Hanke system as shown in FIG. 2, which the Examiner relied on, teaches a multi-stage air classification system including two classifying stations, each of which has its own centrifuge basket. The first air classifier stage 1 classifies particles into coarse material particles and fine material particles. The coarse material particles fall into the coarse material hopper 8, which then are further classified in the second air classifier 2. *See* Hanke, column 5, lines 17-64. The fine material particles do not enter the second air classifier 2. Rather, "[t]he **fines** led by the classifying air into the interior of centrifuge basket 9 are **sucked out to the following dust separators**." Hanke, column 5, lines 38-40.

In other words, the Hanke system is similar to the prior art disclosed in FIG. 1 of the present application, which requires one or more external cyclone(s) or filter(s) outside the body for recovery of fine material exiting the classifier. *See* FIG. 1 and paragraph [0038] of the present application specification. However, the Applicant's

claimed invention improves upon such prior art by providing a recovery chamber for fine materials within the dynamic air classifier. As stated by Applicant in paragraph [0008] of the specification, the present invention improves upon the prior art by providing a dynamic air classifier which allows "the recovery of the fine materials occurring in the body of the classifier", while "avoiding the use of external filters or cyclones." As such, Applicant respectfully submits that Hanke, when considered in its entirety, leads away from the claimed air classifier of the present invention by specifically teaching a separate "dust separators" for recovery of fine materials exiting the first air classifier stage 1. Therefore, Hanke alone or combined with Weit cannot render claim 1 obvious.

However, even if Hanke were combined with Weit as suggested by the Examiner, *arguendo*, the combination does not teach or suggest all the limitations of independent claims 1 and 14. The Examiner primarily relied on Hanke for rejecting independent claim 1. Specifically, the Examiner called out the second air classifying stage 2 as the equivalent structure to the recovery chamber for fine materials as required in claim 1. Then, the Examiner admitted that Hanke fails to teach all elements of independent claim 1 by stating "Hanke does not disclose wherein the recovery chamber is adapted to use the vortex created by the rotary cage for cycloning said material." To cure this deficiency, the Examiner relied on Weit. However, a closer reading of the Hanke and Weit reveals that neither references teaches or suggests the claimed **recovery chamber for fine materials**.

As discussed above, the second air classifier 2 of Hanke system, which the Examiner called out as the equivalent structure to **the recovery chamber for fine materials,** is actually another **classifier stage** for further reclassification of the **coarse materials** from the first air classifier stage 1. Specifically, Hanke states in column 5, lines 53-56, "[t]he coarse material leaving the first coarse material hopper 8 passes onto . . . the second centrifuge basket 14 [of the second air classifier stage 2] for reclassification purposes." As quoted, the second air classifier stage 2 is a separate reclassification station for the coarse material particles, which had been classified from fine material particles from the first air classifier stage 1, and it is not a recovery chamber for recovering fine materials from fine materials carried in an air stream.

Further, neither does Weit teach a recovery chamber for fine materials as required by claim 1. In fact, the system, as shown in FIG. 1 of Weit, looks very similar to the prior art shown in FIG. 1 of the present application. In the prior art system as shown in FIG. 1 of the present application is configured such that fine materials from the rotary cage 1 exit out the system through path 15 for fine material recovery via external separators (i.e. filters or cyclones). Similarly, in the Weit system, fine particles passing through the classifier basket 4 exit out of the classifying system through the fine material outlet 26. *See* Weit, column 3, lines 40-45. Nowhere does Weit teach or suggest a recovery chamber for fine materials as required by independent claim 1. Therefore, Applicant respectfully solicits reconsideration and indication of allowability of claim 1 and its dependent claims 2-13 and 16-18.

Similarly, independent claim 14 requires "recovering the fine materials in the recovery chamber (2) . . . using the vortex created by the rotary cage and possibly further accelerated by mobile or fixed deflectors (4) for cycloning the fine material; separating the dedusted air and the fine particles and extraction of the latter to a means of conveyance." However, as discussed at length with regard to claim 1, Hanke does not teach or suggest recovering of the fine materials in the recovery chamber, wherein fine particles are separated from air and extracted. Rather, the second classifier stage 1 called out by the Examiner as the equivalent structure to the recovery chamber is an additional classifying station for reclassification of coarse particles. Further, Weit fails to cure this deficiency as discussed above. Thus, Applicant respectfully requests reconsideration and indication of allowability of claim 14.

Furthermore, modifying the Hanke system with Weit as suggested by the Examiner's suggestion will render the Hanke system inoperable for its intended purpose as will be explained in detail below. MPEP § 2143.01 states that the proposed modification cannot render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

In combining Hanke and Weit to find claim invention obvious, the Examiner stated "[i]t would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Hanke to include the teachings of Weit wherein the recovery chamber was open to use the vortex created by the rotary chamber so that a more efficient and through separation of the material could occur

during operation through the use of the vortex aiding in separation within the recovery chamber. However, such a modification of the Hanke system would render the Hanke system inoperable for its intended purpose of providing multi-stage classification.

As discussed above, Hanke provides a multi-stage classification system to improved classification efficiency. That is, the Hanke system provides the second air classifier stage 2 for further reclassification of coarse material particles from the first air classifier 1. Specifically, Hanke stated in Abstract, "Known air classifiers suffer from considerable deficiencies with regards to the throughput and the separation efficiency. To avoid this, the invention provides for the performance of a separate reclassification, which takes place in the same way as the pre-classification, whilst incorporating mechanical centrifugal rejection of coarse material particles, particularly through the impact ledges of a centrifuge basket." However, modifying the Hanke system such that the bottom of the first classifier 1 is open to the second classifier 2 will essentially combine two classifying stations into one large station, eliminating the advantages the Hanke reference intended to provide through its multi-stage system. The intended purpose of the second classifier stage 2 of the Hanke reference is to provide for an additional separate classifying station designed to use its own centrifuge basket for further reclassification of the coarse materials after the initial classification in the first classifier 1. If the bottom of the first classifier 1 is opened to the second classifier 2, this intended purpose of the Hanke system would become inoperable, as particles entering the first classifier 1 would fall into the second classifier 2 without being classified in the first classifier 1, thus eliminating multi-stage classification functions of the Hanke system. Therefore, Applicant respectfully submits that Hanke combined with Weit cannot render claims 1-14 and 16-18 obvious.

Finally, in response to the Examiner's comments regarding functional language and/or intended use phrasing, Applicant reiterates that claim 1, as previously amended, no longer includes any functional language and/or intended use phrasing. Claim 1 now recites "a rotary cage (1) adapted to created a vortex when subject to fluid flow" and "the recovery chamber (2) adapted to use the vortex created by the rotary cage". Such use of "adapted to" language is consistent with the Court's holding regarding allowable languages to define a claimed structure. The Court has held that limitations including "members adapted to be positioned" in a claim directed to a kit

of component parts capable of being assembled serve to precisely define present structural attributes of interrelated component parts of the claimed assembly. *See* MPEP § 2173.05(g) citing *In re Venezia*, 530 F.2d 956 (CCPA 1976). As such, Applicant respectfully submits that claim 1 defines the claimed structure which is distinguishable over the prior art as discussed above. That is, it defines the structural interrelationships that are missing in the cited prior art.

Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Extension of Time and Fee Deficiency

Applicants believe that no extension of time is required. However, this conditional petition is being made to provide for the possibility that Applicants have inadvertently overlooked the need for a petition and fee for extension of time. If any additional fee is required, or any overpayment is made, in connection with this communication please charge or credit deposit account No. 50-3505.

Respectfully submitted,

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Date: November 10, 2008